

Claims

1. A magnetic thin film layer structure comprising:
 - a layer of RuAl;
 - 5 a layer of NiAlB epitaxially deposited on the layer of RuAl; and
 - a ferromagnetic layer deposited after the layer of NiAlB.
2. The magnetic thin film layer structure of claim 1 wherein the NiAlB has approximately from 2 to 5 atomic percent boron with the remainder being
10 generally divided between nickel and aluminum.
3. The magnetic thin film layer structure of claim 2 wherein NiAlB has approximately 50 atomic percent nickel, 48 atomic percent aluminum and 2 atomic percent boron.
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4. The magnetic thin film layer structure of claim 1 further comprising a substrate and a pre-seed layer of CrTi deposited on the substrate prior to the layer of RuAl.
5. The magnetic thin film layer structure of claim 1 wherein the substrate is
20 circumferentially textured glass.
6. The magnetic thin film layer structure of claim 1 further comprising an underlayer of CrTi deposited on the layer of NiAlB.
- 25 7. The magnetic thin film layer structure of claim 1 further comprising a magnetic layer stack including a layer of CoCr and a layer of CoPtCrB separated by a spacer layer.
8. The magnetic thin film layer structure of claim 7 wherein the spacer layer is
30 ruthenium.

9. A magnetic thin film disk comprising:

an amorphous or nanocrystalline pre-seed layer;

a seed layer of RuAl with a B2 crystallographic structure deposited on the pre-seed layer;

5 a seed layer of NiAlB deposited with a B2 crystallographic structure on the layer of RuAl; and

at least one ferromagnetic layer above the layer of NiAlB.

10. The magnetic thin film disk of claim 9 wherein the NiAlB has approximately
10 from 2 to 5 atomic percent boron with the remainder being generally divided between nickel and aluminum.

11. The magnetic thin film disk of claim 10 wherein NiAlB has approximately 2 at.% boron.

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12. The magnetic thin film disk of claim 9 further comprising a substrate and wherein the pre-seed layer is CrTi deposited on the substrate.

13. The magnetic thin film disk of claim 9 further comprising an underlayer of
20 CrTi deposited on the layer of NiAlB prior to the ferromagnetic layer.

14. The magnetic thin film disk of claim 9 wherein the ferromagnetic layer is CoPtCrB and is preceded by a spacer layer and a layer of CoCr forming a magnetic layer stack.

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15. A magnetic disk drive comprising:

a magnetic transducer including a read head and a write head;

a suspension supporting the magnetic transducer over a magnetic disk;

and

30 the magnetic disk including a dual seed layer of RuAl/NiAlB.

16. The magnetic disk drive of claim 15 wherein the NiAlB has approximately from 2 to 5 atomic percent boron with the remainder being generally divided between nickel and aluminum.

5 17. The magnetic disk drive of claim 16 wherein NiAlB has approximately 50 atomic percent nickel, 48 atomic percent aluminum and 2 atomic percent boron.

18. The magnetic disk drive of claim 15 wherein the magnetic disk further comprises a circumferentially textured substrate and the magnetic disk has an
10 Mrt orientation ratio greater than one.

19. The magnetic disk drive of claim 15 wherein the magnetic disk further comprises an underlayer of CrTi deposited on the layer of NiAlB.

15 20. The magnetic disk drive of claim 15 wherein the magnetic disk further comprises a magnetic layer stack including a layer of CoCr and a layer CoPtCrB separated by a spacer layer.